

## Insects and Other Arthropods from Kure Island

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(Submitted for publication December, 1962)

Kure Island, sometimes called Ocean Island and located 1,200 miles to the northwest of Honolulu, 56 miles west of Midway Islands, is the northernmost island of the Hawaiian Archipelago. It is an atoll, circular in outline with a reef surrounding a lagoon approximately 6 miles in diameter. In the southeast portion of the lagoon lies Green Island, the only land mass of any consequence, which is about a mile long and less than a half mile wide, rising to a height of 20 feet above the ocean. An airstrip now runs almost the entire length of the island.

The vegetation of Kure consists mainly of dense thickets of *Scaevola*. The dominant plant in the open areas within these thickets and around the margins is *Boerhavia*, with some *Solanum nelsoni*. In addition to these three plants, *Lepidium*, *Achyranthes*, *Eragrostis*, *Tribulus*, *Ipomoea*, *Verbesina*, *Gnaphalium*, and *Erigeron* grow in the disturbed areas around the camp and under the 625-foot radio tower. Various cultivated plants and seeds, flown to the island during March 1961, were planted in the clearings around the buildings; a number of weed species were obviously introduced with the 1500 plants; and other weed species probably came in with the heavy construction equipment.

The Tanager Expedition visited Green Island in April 1923. With D. T. Fullaway as entomologist, 35 species of insects were collected (Bryan, 1926), the only record of insects from the island. The present authors collected 96 species of insects and other terrestrial arthropods and failed to find 15 species collected by Fullaway. Nearby Midway Atoll had 205 species recorded by Suehiro (1960); Laysan had approximately 140 species (Butler, 1961) to which subsequent collecting in 1961 and 1962 (Butler and Usinger, in manuscript) made a total of approximately 190 species.

The authors visited Kure Island from September 12–14, 1961 through the courtesy of the United States Coast Guard and Dr. H. J. Coolidge. Appreciation for determining the specimens is expressed to P. A. Adams, P. D. Ashlock, W. T. Ateyo, R. S. Beal, Jr., J. W. Beardsley, J. C. Bequaert, F. A. Bianchi, O. L. Cartwright, D. A. Chant, E. A. Chapin, R. L. Doult, H. Dybas, R. G. Fennah, W. J. Gertsch, A. B. Gurney, D. F. Hard-

<sup>1</sup>Journal Paper no. 781, University of Arizona, Agricultural Experiment Station.

wick, D. E. Hardy, H. Kulzer, M. A. Miller, E. L. Mockford, C. F. W. Muesebeck, E. G. Munroe, R. D. Pope, L. M. Russell, C. W. Sabrosky, M. R. Smith, R. W. Taylor, H. Townes, D. M. Tuttle, R. H. Van Zwaluwenburg, S. L. Wood, D. L. Wray, C. M. Yoshimoto, and E. C. Zimmerman.

Thanks are also due to C. H. Lamoureux, botanist of our expedition, who assisted in identifying the plants. His report indicated that there were 41 species of vascular plants growing on the island, including all 13 species of plants collected by the Tanager Expedition and 22 species of newly introduced weeds and cultivated plants.

## ARACHNIDA

### ACARINA

#### Phytoseiidae

**Typhlodromus** (*Amblyseius*) **largoensis** (Muma), determined by D. A. Chant. 1961.

#### Uropodidae

Specimens not identified.

#### Bdellidae

**Bdellodes longirostris** (Hermann), determined by W. T. Ateyo. 1961.

#### Tetranychidae

**Tetranychus neocalidonicus** André (*Tetranychus cucurbitae* Rahman and Punjab) determined by D. M. Tuttle. 1961. Host: *Scaevola*; causes leaves to be curled and yellow.

**Tetranychus** sp. **telarius** group (no males), determined by D. M. Tuttle. 1961. Host: *Ipomoea* and *Codiaeum*.

#### Tenuipalpidae

**Brevipalpus obovatus** Donnadieu, determined by D. M. Tuttle. 1961. On *Ipomoea*.

#### Carabodidae

**Carabodes** sp., determined by D. M. Tuttle. 1961.

#### Galumnidae

**Pergalumna** sp., determined by D. M. Tuttle. 1961.

### ARANEIDA

(Determined by W. J. Gertsch)

#### Scytodidae

**Scytodes lugubris** Thorell. 1961.

**Scytodes striatipes** Koch. 1961. On *Scaevola*.

#### Argiopidae

**Neoscona vertebrata** McCook. 1961. A very common large spider.

#### Clubionidae

**Chiracanthium diversum** Koch. 1961.

#### Oonopidae

**Gamasomorpha** sp. 1961. On *Eragrostis*.

Salticidae

**Metaphidippus** sp. 1961.

**Hasarius adansoni** Audouin. 1961.

CRUSTACEA

ISOPODA

(Determined by M. A. Miller)

Oniscidae

**Porcellionides pruinosus** (Brandt). 1961.

**Porcellio** (?) sp. 1961.

Cubaridae

**Cubaris** sp. 1961.

Trichoniscidae

Specimens not determined. 1961.

CHILOPODA

Lithobiidae

**Onebius moananus** Chamberlin. 1923.

Geophilidae

**Honuaphilus alohanus** Chamberlin. 1923.

HEXAPODA

COLLEMBOLA

(Determined by D. L. Wray)

Isotomidae

**Proisotoma thermophila** Axelson. 1961.

Poduridae

**Brachystomella parvula** Schaffer. 1961.

Entomobryidae

**Drepanocyrtus terrestris** Folsom. 1961.

**Entomobrya marginata** Tullberg. 1961.

ORTHOPTERA

(Determined by A. B. Gurney)

Blattidae

**Onychostylus notulatus** (Stål) [*Eoblatta notulata* (Stål), *Graptoblatta notulata* (Stål)]. 1923, 1961.

**Cutilia soror** (Brunner). 1923, 1961.

**Periplaneta australasiae** (Fabricius). 1923, 1961.

**Pycnoscelus surinamensis** (Linnaeus). 1923, 1961.

Pyrgomorphidae

**Atractomorpha sinensis** Bolivar (*A. ambigua* Bolivar). Feeding on *Scaevola*.

Tettigoniidae

**Conocephalus saltator** (Saussure). 1961.

## DERMAPTERA

(Determined by A. B. Gurney)

## Labiduridae

**Anisolabis eteronoma** Borelli, [*A. maritima* (Gene)]. 1923, 1961.**Euborellia annulipes** (Lucas).

## CORRODENTIA

Psocids. 1923.

## Peripsocidae

**Ectopsocus perkinsi** Banks, determined by E. L. Mockford. 1961.

## MALLOPHAGA

## Philopteridae (Thompson, 1950)

**Halipeurus mirabilis** Thompson. 1923. Host: *Diomedea nigripes*.**Harrisoniella** species (?). 1923. Host: *Diomedea nigripes*.

## THYSANOPTERA

## Thripidae

**Thrips tabaci** Lindeman. 1923.**Frankliniella sulphurea** (Schmutz), determined by F. A. Bianchi. 1961.Hosts: *Boerhavia*, *Ipomoea*, *Solanum nigrum*.

## Phlaeothripidae

**Haplothrips gowdeyi** (Franklin), determined by F. A. Bianchi. 1961.Hosts: *Lepidium*, *Eragrostis*.

## HEMIPTERA

## Lygaeidae

**Nysius fullawayi fullawayi** Usinger, determined by R. L. Usinger. 1961.Host: *Gnaphalium*.**Nysius palor** Ashlock, determined by P. D. Ashlock. 1961. Hosts:*Gnaphalium*, *Erigeron canadensis*.

## Nabidae

**Nabis capsiformis** Germar [*Reduviolus capsiformis* (Germar)], determined by R. L. Usinger. 1923, 1961.

## Anthocoridae

**Orius persequens** (White) (*Triphleps persequens* White), determined by R. L. Usinger. 1923, 1961.

## Miridae

**Cyrtopeltis modesta** (Distant), determined by R. L. Usinger. 1961. Hosts: *Boerhavia*, *Erigeron canadensis*.

## HOMOPTERA

## Delphacidae

**Chloriona paludum** (Kirkaldy) [*Kelisia paludum* Kirkaldy, *Liburnia paludum* (Kirkaldy)], determined by R. G. Fennah. 1923, 1961.

## Aphididae

**Rhopalosiphum maidis** (Fitch), determined by L. M. Russell. 1961.  
Host: few on *Eragrostis*.

## Margarodidae

**Icerya purchasi** Maskell, determined by J. W. Beardsley. 1961. Host:  
*Casuarina*.

## Pseudococcidae

**Ferrisia virgata** (Cockerell), determined by J. W. Beardsley. 1961.  
Hosts: *Boerhavia*, *Eragrostis*, *Lepidium*, *Scaevola*, *Solanum*, *Tribulus*,  
and "mint." A heavy infestation was present on *Boerhavia*; in some  
areas the plants were entirely defoliated, and the tips of the stems  
appeared white with the dense clusters of mealybugs.

## NEUROPTERA

## Hemerobiidae

**Symphorobius barberi** (Banks), determined by P. A. Adams. 1961.

## Chrysopidae

**Chrysopa** sp. 1923.

**Chrysopa carnea** Stephens, determined by P. A. Adams. 1961.

## LEPIDOPTERA

## Noctuidae (determined by D. F. Hardwick)

**Heliothis zea** (Boddie). 1961. On the heads of *Eragrostis*.

**Agrotis ipsilon** (Hufnagel). 1961.

**Prodenia** sp. (not *ornithogalli*). 1961. Very abundant.

**Autographa chalcites** (Esper) (*Plusia chalcites* Esper). 1923, 1961.

## Sphingidae

**Celerio lineata** (Fabricius). 1961.

## Cynodiidae

**Petrochroa dimorpha** Busck. 1923.

## Pyralidae

**Hellula phidilealis** (Walker), determined by E. G. Munroe. 1961.

## Tineidae

**Comodica fullawayi** Swezey. 1923.

## Plutellidae

**Plutella maculipennis** Curtis. 1923.

## Pterophoridae

**Megalorhipida defectalis** (Walker), determined by D. F. Hardwick.  
1961.

## COLEOPTERA

## Staphylinidae

**Medon debilicornis** Wollaston. 1923.

## Coccinellidae

**Coelophora inaequalis** (Fabricius), determined by E. A. Chapin. 1961.

**Scymnus (Pullus) loewii** Mulsant [*Pullus kinbergi* (Boheman)], determined by E. A. Chapin. 1923, 1961. On *Scaevola*.

**Scymnus (Pullus) sp.**, 1961.

## Cucujidae

**Cryptamorphia desjardinsi** Guerin, determined by H. Dybas. 1923, 1961.

## Dermestidae

**Dermestes ater** DeGeer, determined by R. S. Beal, Jr. 1961.

**Dermestes maculatus** DeGeer, determined by R. S. Beal, Jr. 1961.

## Elateridae

**Conoderus pallipes** (Eschscholtz), determined by R. H. Van Zwaluwenburg. 1961.

## Tenebrionidae

Undetermined. 1923.

**Gonocephalum adpressiformis** Kaszab, determined by H. Kulzer. 1961.

## Scarabaeidae

**Pleurophorus micros** (Bates) (*Psammодиус nanus* DeGeer), determined by O. L. Cartwright. 1961.

**Saprosites** sp.

**Saprosites** sp. [*dilutus* (Fairmaire)], determined by O. L. Cartwright. 1961.

**Saprosites pygmaeus** Harold. 1923.

## Scolytidae

**Hypothenemus eruditus** Westwood, determined by S. L. Wood. 1961.

On *Cyperus laevigatus*.

## Corylophidae

**Sericoderus minutus** Matthews, determined by R. D. Pope. 1961.

## Curculionidae (determined by E. C. Zimmerman)

**Pentarthrum halodorum** Perkins. 1923, 1961.

**Dryotribus wilderi** Perkins. 1923, 1961.

**Araecerus fasciculatus** (DeGeer). 1923, 1961.

**Dryophthorus distinguendus** Perkins. 1961.

## DIPTERA

## Mycetophilidae

**Neosciara molokaiensis** (Grimshaw). 1923.

## Scenopinidae

**Lucidomphrale lucida** (Becker), determined by D. E. Hardy. 1961.

## Dolichopodidae

**Chrysosoma fraternum** Van Duzee, determined by D. E. Hardy. 1961.

**Psilopus patellifer** Thompson. 1923.

Undetermined species. 1923.

## Syrphidae

**Ischiodon scutellaris** (Fabricius), determined by D. E. Hardy. 1961.

## Ephydriidae

**Hecamede persimilis** Hendel, determined by D. E. Hardy. 1961.

## Asteiidae

**Bryania bipunctata** Aldrich, determined by D. E. Hardy. 1961.

## Agromyzidae

**Liriomyza** sp. 1961.

## Milichiidae

**Milichiella lacteipennis** Loew, determined by D. E. Hardy. 1961.

## Chloropidae

**Hippelates collusor** (Townsend), determined by C. W. Sabrosky, 1961.

This single specimen may have come from a contaminated collecting tube.

**Hippelates nigricornis** var. **flavus** Thompson. 1923.

**Cadrema pallida** Loew, determined by D. E. Hardy. 1961.

## Sarcophagidae

**Parasarcophaga** (Thomsonae) **argyrostoma** (R. D.), determined by D. E. Hardy. 1961.

## Calliphoridae (determined by D. E. Hardy)

**Chrysomyia megacephala** (Fabricius), 1961.

**Lucilia graphita** Shannon, 1923, 1961.

**Phaenicia cuprina** (Wiedemann), 1961.

## Muscidae (determined by D. E. Hardy)

**Ophyra chalcogaster** (Wiedemann). 1961.

**Musca domestica** L. 1961.

## Anthomyidae

**Fannia canicularis** L. 1923.

## Hippoboscidae

**Olfersia aenescens** Thompson, determined by J. C. Bequaert. 1961.

## HYMENOPTERA

## Braconidae (determined by C. F. W. Muesebeck)

**Apanteles marginiventris** (Cresson). 1961.

**Chelonus blackburni** Cameron. 1961.

## Ichneumonidae

**Diplazon laetatorius** Fabricius, determined by H. Townes. 1961.

**Devorgilla** n. sp. 1961. Swarming about *Scaevola* at two high points on the island.

## Mymaridae

**Polynema reduvioli** Perkins. 1923.

**Stephanodes** near **similis** (Foerster), determined by R. L. Doutt. 1961.

## Cynipidae

**Cothonapis pacifica** Yoshimoto, determined by C. M. Yoshimoto. 1961.

## Formicidae

**Ponera gleadowi** Forel, determined by R. W. Taylor. 1961. Under *Boerhavia*.

**Cardiocondyla nuda** (Mayr), determined by R. W. Taylor. 1961.

**Tetramorium guineense** (Fabricius), determined by M. R. Smith. 1923, 1961. Under *Boerhavia* and on *Eragrostis* with *Ferrisia virgata*.

**Tetramorium tonganum** Mayr, determined by R. W. Taylor. 1961.

**Tapinoma melanocephalum** (Fabricius), determined by M. R. Smith. 1923, 1961. On *Ipomoea*, *Tribulus*, *Eragrostis*, and *Solanum* associated with *Ferrisia virgata*.

## Vespididae

**Polistes fuscatus aurifer** Saussure, determined by J. C. Bequaert. 1961.

Nesting in lower branches of *Scaevola* near camp; very abundant around water sources in camp.

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